



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,066	06/24/2002	Dennis Chancellor	215/955-US1	8640
34284	7590	05/05/2004	EXAMINER	
ROBERT D. FISH; RUTAN & TUCKER, LLP P.O. BOX 1950 611 ANTON BLVD., 14TH FLOOR COSTA MESA, CA 92628-1950			MENON, KRISHNAN S	
			ART UNIT	PAPER NUMBER
			1723	

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/019,066	CHANCELLOR ET AL.
	Examiner Krishnan S Menon	Art Unit 1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 12 April 2004.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-3 and 6-18 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-3 and 6-18 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____

5) Notice of Informal Patent Application (PTO-152)
6) Other: _____

DETAILED ACTION

Claims 1-3 and 6-18 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 6-10 and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Call (US 4,083,780).

Claims 1 and 17: Call teaches a filtration systems comprising an outer casing (36-fig 1 & 3) having plurality of inner casings having inner lumens (26); inner lumen having plurality of filter elements (14 a-d), with feed flow to the upstream filter, feed exiting from the upstream filter mixed with fresh feed entering the down-stream filter (Call teaches the filter elements as having a "brine seal" around the filter to prevent the feed from bypassing around the filter in col 4 lines 39-61. However, in col 4 lines 58-61, Call teaches that the brine seal could be omitted in some applications. When the brine seal is omitted, part of the feed would by-pass the upstream filter and would be mixed with the waste fluid exiting the upstream filter to become feed for the downstream filter).

Call does not teach a specific structure for the down-stream inlet, like a nozzle or a port, positioned downstream of the upstream element and upstream of the downstream element as in claims 1 and 17. However, Call teaches the feed by-pass

around the filter when there is no brine seal provided (as taught by col 4 lines 58-61), which result in additional feed fluid entering the inner lumen at a point between the upstream and downstream filters. The feed thus bypassing the upstream filter (when no brine seal is provided) would be equivalent to fresh feed entering through an inlet port between the upstream and down-stream filters. In this case, the prior art element: (A) performs the identical function specified in the claim in substantially the same way, and produces substantially the same results as the corresponding element disclosed in the specification. *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000) (B) is not excluded by any explicit definition provided in the specification for an equivalent. A person of ordinary skill in the art would have recognized the interchangeability of the element shown in the prior art for the corresponding element disclosed in the specification. *Caterpillar Inc. v. Deere & Co.*, 224 F.3d 1374, 56 USPQ2d 1305 (Fed. Cir. 2000); *Al-Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 1316, 50 USPQ2d 1161, 1165 (Fed. Cir. 1999); *Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus. Inc.*, 145 F.3d 1303, 1309, 46 USPQ2d 1752, 1757 (Fed. Cir. 1998); *Lockheed Aircraft Corp. v. United States*, 193 USPQ 449, 461 (Ct. Cl. 1977); *Data Line Corp. v. Micro Technologies, Inc.*, 813 F.2d 1196, 1 USPQ2d 2052 (Fed. Cir. 1987).

Call teaches manifolds for coupling the inner lumens and the cores of the inner casings as in claim 6 (see figures); manifolds extend from the same ends as in claim 7 (figures); continuous core space through which permeate flows as in claim 8 ((12 – fig 1); serial disposition of the filter in inner casing with continuous annuls as in claim 9 (fig

1); spiral wound as in claim 10 (fig 2; col 3 lines 60-65); disposed above ground as in claim 13 (no teaching in the ref as to other than being above ground; implicit disclosure: “[I]n considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968); In re Lamberti, 545 F.2d 747, 750, 192 USPQ 278, 280 (CCPA 1976)); coupling/filter ratio < $\frac{1}{4}$ as in claims 14-16 (plurality of elements in claim 1 of the reference and fig 1). Re claim 18, the feed fluid distribution between the upstream and downstream inlets is a variable that can be optimized to have the desired pressure drop in the elements/system (Discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art. In re Boesch and Slaney, 205 USPQ 215 (CCPA 1980); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Aller, 42 CCPA 824, 220 F.2d 454, 105 USPQ 233 (1955).)

2. Claims 2,3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Call (US 4,083,780) in view of Eckman (US 5,470,469).

Eckman teaches all the limitations of claim 1. Claims 2,3 and 11 add further limitations of pressure reducing orifice with 50-70% of the feed entering the upstream filter, max pressure drop 20%, and hollow fiber elements. Eckman teaches the orifice for limiting pressure drop and hollow fiber elements (abstract; 48-fig 2; col 5 lines 5-10; 39-50). It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Eckman in the teaching of Call for the orifice for properly adjusting

the feed by-pass (Eckman col 5 lines 39-50) and for hollow fiber elements to overcome the draw-backs of the spiral wound (col 3 lines 60-67; col 6 lines 25-40). Re the 50-70% feed entering the upstream filter, process flow optimization for pressure drop, etc. (In re Boesch and Slaney)

3. Claims 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Call (US 4,083,780) in view of Oklejas et al (US 4,983,305).

Call teaches all the limitations of claim 1. Claim 12 adds further limitation of an energy recovery device, which is not taught by Call, but taught by Oklejas (abstract, figures). It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Oklejas in the teaching of Call to have an energy recovery pump as taught by Oklejas to recover the energy from the waste stream (abstract).

Response to Arguments

Applicant's arguments filed 4/12/04 have been fully considered but they are not persuasive.

Re Applicant's argument about the lack of a down-stream inlet (an inlet between the upstream and down-stream filter elements) in Call reference: Applicant argues that Call reference provides a brine seal (feed bypass seal) to prevent feed bypass around the filter elements in col 4 lines 39-46, which is correct, and the examiner has pointed this out in the rejection. However, what applicant fails to recognize is the teaching in the subsequent lines that a feed bypass seal is not mandatory and may be omitted in

some applications (lines 58-61). When the feed bypass seal is omitted, part of the feed would bypass the upstream element and join with the waste fluid of the upstream element to become the feed for the downstream element, which is equivalent to providing a fresh feed inlet to the downstream side of the upstream filter element as claimed.

Applicant continues to argue that the present claims do not have 'means plus function' language, that the "function-way-result" test (test for equivalence) is meant for means plus function language claims only, that it is not applicable for patentability analysis, applicable only in infringement analysis; and adds on to say that "to establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and would be recognizable to a person of ordinary skill in the art ...". Well, a feed bypass path around the upstream element **is a down-stream inlet** positioned upstream of the downstream element; applicant does not claim any specific structure for the down-stream inlet other than reciting a 'down-stream inlet'; and the bypassing feed provided by not having the brine seal around the upstream element inherently provides fresh feed to the downstream element. The only reason the examiner made this a 103(a)-equivalence rejection is because the downstream inlet of the reference does not match structurally with the downstream inlet of the applicant's disclosure; the rejection could stand even if the applicant recited the actual downstream inlet structure in the claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Application/Control Number: 10/019,066
Art Unit: 1723

Page 8

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Krishnan Menon
Patent Examiner

Walker
W. L. WALKER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700